DOCUMENT RESUME

ED 081 096 EA 005 343

AUTHOR	Scanlon, Robert G.
TITLE	Bringing About Change in the Schools. A Case Study: Lake Park Elementary School, Lowndes County School District, Georgia.
PUB DATE	Feb 73
NOTE	60p.; Paper presented at American Educational Research Association Annual Meeting (58th, New Orleans, Louisiana, February 26-March 1, 1973)
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	Administrator Role; *Case Studies; *Educational Change; Educational Improvement; *Elementary Schools; Humanization; *Individualized Instruction; Instructional Innovation; Interagency Cooperation; Program Evaluation; Relevance (Education); School Community Cooperation; *Student Centered Curriculum; Teacher Role
IDENTIFIERS	Georgia; *Individually Prescribed Instruction; IPI

ABSTRACT

To develop a dissemination strategy for optimal impact on the educational community and to establish a working relationship with State Education Agencies (SEA's), Research for Better Schools (RBS), in 1971, formed a nationwide network of schools as a proving ground for Individually Prescribed Instruction (IPI). The network includes a partnership of SEA's and local education agencies that make possible a controlled IPI strategy and a demonstration of IPI programs to the educational community. In addition, network schools serve as training centers for administrators who wish to bring individualization to their districts. One of these schools, the Lake Park Elementary School, is the subject of this case study. The school enrolls 619 children and is located in an area peopled in equal parts by farmers, skilled or semi-skilled factory workers, and upper middle class professionals. Desegregation mandates had previously spurred the school district towards efforts to assess needs, evaluate existing schools and classrooms, and assess the problems associated with the move from desegregation (physical placement of humans) to integration (equal opportunities.) This paper explores the 4-way partnership that resulted between the school, the county school district, the Georgia State Department, and RBS in implementing an IPI program at Lake Park. (Author/DN)

FILMED FROM BEST AVAILABLE COPY

ED 081096

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

BRINGING ABOUT CHANGE IN THE SCHOOLS

A Case Study

Lake Park Elementary School

Lowndes County School District

Georgia

by

Robert G. Scanlon
Executive Director
RESEARCH FOR BETTER SCHOOLS, INC.
1700 Market Street
Philadelphia, Pennsylvania 19103
(215) 561-4100

Presented at

Meetings of the American Educational Research Association
New Orleans, Louisiana

February 1973

EA 005 343

TABLE OF CONTENTS

	Page
OVERVIEW	1
INTRODUCTION	4
Background	5
Lowndes County Priorities	8
IMPLEMENTATION GOALS	17
First Year Goals	17
Third Year Goals	18
Long Range Goals	18
IMPLEMENTATION: LAKE PARK ELEMENTARY SCHOOL	20
First Year Implementation	22
First Year Operation	26
Second Year Expansion	30
Third Year Refinement	35
RELATIONSHIP: LAKE PARK ELEMENTARY/ GEORGIA STATE DEPARTMENT/ RESEARCH FOR BETTER SCHOOLS	41
Cost	42
EVALUATION	45
IPI and Behavior: An Evaluation of Cognitive and Affective Change	46
Nationwide Network: Evaluation Study 1971-72	51
CONCLUSION	57

OVERVIEW

Most curricula can be defined as fixed schedules of academic expectations which have evolved to serve the majority of students at a given chronological age. Existing programs not only lack specificity of tasks and expected outcomes, but also measures of student, teacher, and supportive personnel performance so that educational accountability is difficult to determine.

Out of the desire to resolve some of these problems, in the spring of 1968 school officials in Lowndes County, Georgia concluded that the only way to adequately serve their students was to completely exchange the then current educational structure for a system which accepted as fact the existence of a wide range of individual differences among children. They recognized a clear-cut need to provide students with continuous evaluation so that they can be placed in learning settings appropriate to their individual requirements, learning characteristics, and achievement levels.

High priority needs listed by county officials were:

a. Need for equality of educational opportunity;

b. Need for self-determination;

c. Need for congruency between instructional theory and educational practice;

d. Need for an educational program based on research, continuous evaluation, and, as necessary, revision;

e. Need for educational accountability.

After an intensive examination of various curricular options, school personnel determined that Individually Prescribed Instruction (IPI) was

the most workable solution to educational needs in Lowndes County. Applications for financial aid were made to officials of Title III, E.S.E.A. and approval was received in June 1970. Lowndes County became the first school system in the nation to commit itself to IPI programs in reading and mathematics on a district-wide basis during the first year of implementation.

Lake Park Elementary School is one of the five elementary schools in Lowndes County that has made the transition to IPI. During the school year 1970-71, IPI Math was implemented in grades one through six and Stage IV Reading in grades four, five, and six. During the school year 1971-72, the IPI Primary Reading Program and the Spelling Program were added to the curriculum.

The Lake Park principal attended two Administrative Training Programs (ATP's), one in math and the other in reading, before the first year of implementation. Upon completing the ATP's, he returned to Lake Park to train his teachers and teacher-aides in using the teaching materials, evaluation instruments, and instructional procedures of IPI.

In order to conduct the program both efficiently and effectively the first year, providing an ample number of staff for 600 students was of utmost importance. The instructional staffing pattern, exclusive of special education teachers, appeared as follows:

One principal
One assistant principal
One librarian
Nineteen classroom teachers
Four floating teachers
Eight teacher-aides

Due to the fact that the IPI program was financed in part by Title III project funds, the district also employed a Project Director and a Director of Evaluation, both with clerical helpers.

IPI requires neither realigning existing classroom space nor building entirely new classroom structures. Lake Park has self-contained classrooms for grades three through six. Grades one and two are housed in the "Big Room." The big room is one large room equivalent to four normal size classrooms. It houses approximately 100 pupils and four teachers. School personnel have found that IPI functions as well in either situation. In addition, two materials centers were established for the program. Because of the nature of IPI, the materials in the two centers overlap.

Much of the success of IPI at Lake Park can be attributed to weekly planning sessions which include the principal, the classroom teachers, and the floating teachers. During these sessions the principal demonstrates his role as the instructional leader in the school. He becomes aware of the nitty-gritty, day-to-day problems that teachers face. Schedule, content, procedure, student, and teacher problems all begin to emerge as teachers share experiences and exchange ideas. Planning sessions give both teacher and principal an insight into the total school program, something which in most cases, neither has ever experienced before.

During the two years that IPI has been operating in Lake Park, there has been a noticeable difference in student attitudes towards learning. Students have been freed from "teacher-talk" and are active participants in their own learning. Most have taken on the responsibility of using self-study materials with a new sense of confidence. Teachers too, have shown a new creativity and a new pride in directing youngsters to be independent learners.

IPI has not solved all the educational problems in Lowndes County. It never purported to do that. What is <u>has</u> done is give teachers a structure and a procedure for attack.

INTRODUCTION

Individually Prescribed Instruction (IPI) is an instructional system that permits the teacher to plan and conduct a program of studies tailored to the needs and characteristics of each student. Its procedures have been designed to enable schools to better meet the needs of individual pupils and to provide a new direction in the continuing search for ways to adapt instruction to the individual. The rate of learning, amount of practice, type of materials, and mode of instruction are the parameters of individual differences emphasized in IPI.

Developmental efforts began in 1963 at the Learning Research and Development Center (LRDC) at the University of Pittsburgh. In 1966 a partnership between LRDC and Research for Better Schools (RBS) was created in which RBS assumed the responsibility for field testing, re-developing and disseminating IPI. As dissemination questions arose, RBS found it necessary to develop a dissemination strategy which would permit, optimal impact on the educational community and establish a working relationship with State Education Agencies.

For this purpose, RBS formed a Nationwide Network of Schools for individualized instruction. The Network includes a partnership of State Education Departments and local education agencies that provides a controlled strategy for IPI and makes it possible to demonstrate IPI programs to the educational community.

In addition, Network Schools serve as training centers for administrators who wish to bring individualization to their districts. They also provide RBS with the capability of gathering summative and longitudinal research data valuable in the laboratory's future developmental efforts.

Since its initiation in January 1971, 90 schools in 38 states have joined in this Network of Demonstation/Training Centers.

One of these schools is Lake Park Elementary located in Georgia's Lowndes County School District. This paper explores the four-way partnership between Lake Park Elementary School, the Lowndes County School District, the Georgia State Department and Research for Better Schools.

All elementary schools in the Lowndes County School District, adopted the IPI programs. Since this was the first total adoption by a school system, Lowndes County administration demonstrated a great deal of courage. Their dedication to the improvement of the quality of education for all youngsters must be considered a landmark decision. This case study is, in fact, the story of courage, dedication, and professionalism on the part of the administration and staff of Lowndes County.

Background

Lowndes County is located in central Georgia about eighty miles southeast of Albany, Georgia, and seventy-five miles northeast of Tallahassee, Florida. Incorporated towns include Valdosta (the county seat of government), Hahira, Clyattville, Dasher, Lake Park, Naylor and Remerton.

The county contains 506 square miles populated by approximately 53,406 people. About 31,215 of the people reside within the city of Valdosta and are served by the independent Valdosta City School District.

The community reflects a balance of industry and agriculture. In addition, Moody Air Force Base, located in Lowndes County, has considerable economic and social influence.

Though the average income per household is slightly higher than $9,000, some 22 percent of the families have an annual income of less than $3,000. About 67 percent of the people are Caucasian and 33 percent are Negro.

Additional educational services available include: Valdosta State College, offering a liberal arts and teacher training facility and Valdosta Area Vocational-Technical School, offering vocational or technical training in twenty-six different areas and specialized training in business and cosmetology. An estimated 45 percent of the adult population, aged 25 years and above, has an education level of eighth grade or less, 7 percent hold college degrees.

The Georgia Department of Education ranks the Lowndes County School District 32nd in size among Georgia's 194 systems. County enrollment represents approximately 0.5 percent of total enrollment in Georgia schools. Average daily attendance is 5,799.

Five elementary schools serve Lowndes County. These schools are Clyattville Elementary School; Hahira Elementary School; Lake Park Elementary School; Parker Mathis Elementary School; and Pine Grove Elementary School. With the exception of Pine Grove, the schools average 575 students, 23 teachers, one librarian, one secretary, one assistant principal and one principal. Pine Grove enrolls over 1,000 students and employs 42 teachers. Considerable variation exists among the school populations with respect to family income, educational attainment of parents and socio-cultural benefits for children.

Specificially, Lake Park Elementary School enrolls 619 children and employs 23 teachers. Parents are equally divided into farmers, skilled or semi-skilled factory employees, and upper middle class professionals. The annual median income is $7,000 per family; the average educational attainment level about 10.5; and the racial breakdown about 20 percent Negro and 80 percent Caucasian.

Integration was the chief factor that caused the Lowndes County School District to assess their specific needs and implement a changed curriculum. A federal court order in 1969 mandated a desegregation plan to be in effect by the 1970-71 school year.

Integration put into motion a series of activities: (1) an evaluation of existing schools and classrooms; (2) a needs assessment of the present curriculum in relation to student needs; and (3) an assessment of problems and concerns related to the movement from desegregation (the physical placement of humans) to integration (equal opportunities).

The evaluation of existing elementary schools and classrooms resulted in the closing of two elementary schools, both considered to be inadequate and beyond repair. A bond referendum was passed to construct new classrooms in order to further progress in the district's school consolidation program. For the five remaining elementary schools, this meant the construction of a primary wing on each school campus to house first and second grades and, in some cases, a special education program.

The needs assessment of the curriculum showed that the curriculum was defined as fixed. Since the average child concept was the basis, students who did not fit were placed in some type of closed tracking system or entirely removed from the mainstream for intensive remediation.

The needs assessment also showed that existing programs lacked specificity of tasks, expected outcomes, and value measures of student, teacher, and supportive personnel performance so that educational accountability was difficult to determine.

An outgrowth of this needs assessment was a series of meetings between school officials and all levels of professional educators. Discussions of these problem areas plus an intensive review of the literature resulted in a decision to completely exchange the then current structure for a system which accepted as fact the existence of a wide range of individual differences among children and made arrangements for each child to be engaged at all times in learning that was most appropriate for him as an individual.

Lowndes County Priorities

A list of priority needs for Lowndes County emerged from these meetings.

1. Need for equality of educational opportunity - True equality of educational opportunity is realistic only when schools can be organized to meet the individual needs of each learner. School officials were very much aware that many children needed more opportunity for success than had been offered thus far. Ability grouping had not been effective and, in some cases, had given rise to unfavorable side effects such as reducing the self-esteem of children in lower groups and causing laziness in some bright students.

2. Need for self-determination - Officials thought it important that pupils share a larger portion of the responsibility for determining what in the learning process is important to them. Although they did not advocate complete self-determination for the education of young children, they did favor more than the usual amount of variation with respect to the amount of time and the type of medium utilized by the learner in core requirements.

3. Need for congruency between instructional theory and educational practice - Inconsistencies in curriculum are an impediment to learning. An implicit and theoretical framework put into practice should eliminate many inconsistencies that had previously hindered the instructional process.

4. Need for educational programs based on research, continuous evaluation and, as necessary, revision - Due to the lack of qualified investigators, Lowndes County schools could not, on their own, conduct controlled learning experiments. They could however, cooperate with educational research agencies that have a capable research organization.

5. Need for educational accountability - Constituents should know what their tax money is supporting and receive tangible returns for the money expended.

An assessment of the problems and concerns related to the movement from desegregation to integration took place at a one-day Desegregation Workshop held in October 1969. Mixed groups of Negro and Caucasian teachers discussed the matter of desegregation. The need for individualized instructional programs emerged as the principle topic.

The demand for instructional reform in Lowndes County led to the development of an E. S. E. A. project directed toward meeting Standards for Public Schools of Georgia which states, "The content of each subject matter area is planned, varied, and organized on the basis of the students' abilities, needs and interests."

Furthermore, a series of workshops was planned to provide more specificity. A specialist in elementary education was employed with project funds to conduct a workshop for teachers, principals, and district level personnel. This workshop was designed to familiarize staff with the variety of methods which would meet their needs and to provide a rationale for adopting individualized learning programs in Lowndes County. As with other project designs, staff acceptance of a new curriculum for Lowndes County schools before its actual implementation was an important factor in the success of the program.

Other workshops and conferences centering on local school problems took place in 1969. These workshops brought together community leaders, school personnel, and officials from the Georgia Department of Education and the University of Georgia. Participants clearly indicated that curriculum changes in Lowndes County were needed. Another outcome was the enlistment of interest from the Georgia Department of Education and its subsequent understanding of specific needs in Lowndes County Schools.

Several alternatives to the school structure were considered, all centering on the means by which available personnel and resources could best be organized to implement continuous learning programs so that each student could proceed at his best rate in understanding and mastering essential skills and knowledge. One possible solution was the development of learning programs within the school district through a team effort. Another was the implementation of existing developmental efforts in individualization.

As the pros and cons of each possibility was reviewed, two plans were rejected entirely. Developing learning programs within the school district would require extensive time unavailable to the staff at that time. There was also no clear indication that the resulting programs would be suitable or complete. Computer supported individualized instruction schemes were also rejected. Officials felt that the extensiveness of such programs was yet unexplored and that funding for major equipment might create problems.

An intensive study of the curriculum options revealed IPI to be the most workable alternative. As a systems approach, IPI programs offered instruction geared directly to the individual. Specifically IPI offered:

1. Detailed specification of educational objectives.
   Each student would be able to work at his own learning level regardless of his grade level.

2. Organization of methods and materials to attain these objectives including a variety of paths for mastery of any given objective.
   The learning experience could be tailored to the individual student's needs.

3. A procedure for the diagnosis of student achievement in terms of the educational objectives. Assessment of student needs suggested student assignments would be based on units of study, in-which mastery was not indicated.

4. Individual daily evaluation and guidance of each pupil, including a system for individually prescribing the learning task that the student is ready to undertake. This provided a daily two-way communication link between the student and the teacher.

5. Provision for frequent monitoring of student performance in order to inform both the pupil and the teacher of progress toward an objective. This created a motivation factor.

6. Continual evaluation and strengthening of curricular and instructional procedures. This feedback to IBS permitted constant refinement and revision and in effect involves the school in a developmental function.

These items strongly correlated with goals previously discussed by Lowndes County educators. IPI had unique student benefits in terms of ensuring active student involvement in the learning process, encouraging self-direction and self-initiation of activities, permitting students to determine their own learning rate, and encouraging self-evaluation of progress. These student benefits, combined with the systems approach, seemed most appropriate for Lowndes County's specific needs.

A final decision about the implementation of IPI in Lowndes County could not be made without first seeing the system operating in a school in a school setting. In January 1970, a ten-member team examined IPI in action.

This representative team was composed of the Lowndes County School Superintendent; the Coordinator of Federal Programs in Lowndes County; two curriculum directors; three elementary principals; the Director of Graduate Education, Valdosta State College; a member of the curriculum staff, University of Georgia; and the Assistant Director of Curriculum Development, State Department of Education.

The team visited two IPI demonstration schools. One was located in a lower socio-economic area where students are generally difficult to teach. The other was in a suburban community where children knew success and were expected to achieve. Together, these schools represented a cross section of the student population in Lowndes County.

During the visit the team observed the operation of IPI in the classroom and gained insight into the materials operation which constitutes a vital management feature of the program. Meetings were planned with the administrator, teachers, and teacher aides. This gave the visitors the opportunity to discuss the program at all levels of operation.

During the visit, specific time was freed to allow team members to return to visit classes or the materials center to clarify specific questions and concerns.

The visit concluded by conferring with the Program Director at RBS. This conference answered both broad level and specific questions about the origin and development of the IPI program and described RBS expectations from schools participating in IPI.

Returning to Lowndes County, the team met with other educators in the school district and shared with them their observations. Their recommendation to implement the IPI curriculum in the 1970-71 school year was accepted by the entire group.

This decision set into motion two activities: (1) securing funds to cover the cost of the IPI programs and (2) applying to RBS for the use of IPI programs in Lowndes County.

Initially, local funds were considered as a possible source of revenue to support the program. However, taxpayers were reluctant to expend additional money for a program still in the initial stages of development. Therefore, a Title III E. S. E. A. proposal was written in order to provide the county with necessary funds for a three year implementation period. Having involved the Georgia State Department of Education in initial discussions about curriculum change was to prove beneficial to the Lowndes County Schools. The representative from the State Department of Education provided valuable assistance in writing the funding proposal. He also had the necessary information about district needs and the IPI program to secure approval for the necessary funds from the State Department. This also established the necessary link-up between the Georgia State Department and the Lowndes County Schools.

During the same time that financial support was being requested, an application was sent to RBS requesting the implementation of IPI Mathematics and IPI Intermediate Reading in the fall of 1970. This application included information from the Superintendent and from each of the elementary schools on basic school data, understanding of the IPI programs, and the level of commitment on the part of administration and teaching staff.

Approval for the implementation of IPI Math and IPI Intermediate Reading was received from both RBS and the Georgia State Department. The State Department agreed that the Lowndes County proposal was innovative because although similar projects had been initiated in individual schools for pilot studies, demonstrations, and/or research activities, never before had school officials proposed to adapt an individually prescribed, continuous learning, continuously evaluated program on a school district-wide basis.

Lowndes County's district-wide approach to the implementation of IPI was a high risk venture. The Superintendent, an elected official, put his job on the line for his firm belief that what was good for one school in the district was good for all schools in the district. In addition, two members of the Lowndes County Board of Education who were candidates in the general election for their seats on the Board used the introduction of IPI into the schools as part of their platforms. Both were re-elected.

One reason for the district wide implementation of IPI was the conviction that change through innovation was most effective when responsibilities for implementation are widely distributed. New ideas stand a better chance of catching on and holding if a reasonably large group share a portion of undertaking. A program which assigns tasks to the total staff has a better chance of survival.

Second, the IPI program can be adapted to a wide variety of administrative personalities and techniques. Seeing several alternative methods of management within a single district enables visiting educators to more fully conceptualize possible methods of managing IPI in their own schools.

Third, the most probable method of financing IPI, once Title III funds are expended, was through local taxation. To secure wide public support, the program should have a favorable and personal impact on the largest possible population.

Fourth, since the five school sites draw children from the same general neighborhoods that are served by five adjacent school districts, a greater number of parents would be aware of the improved school program next door and would help find the means by which similar changes can be made in their respective districts.

Finally, the Lowndes County Board of Education, along with the Superintendent and his staff, have made a conscious effort to be fair with the personnel, the student body, and the community in general in providing equality of funds, activities, and services. By doing so, they have removed doubts and suspicion of favoritism and promoted trust in the belief that resources are at as equal a level as possible throughout the district.

IMPLEMENTATION GOALS

Lowndes County officials established three sets of goals for their implementation of IPI. These were divided into implementation goals for the first year, three year goals of the Title III project, and long-range goals beyond three years. These goals are specified below.

First Year Goals

To participate in an administrative training program which will enable the principal to:

1. learn the operations and procedures of the IPI system
2. work with the IPI materials and resources
3. learn the administrative tasks involved in implementing IPI
4. develop strategies for training teachers for IPI
5. develop communication skills useful to IPI
6. formulate an implementation plan for the operation of IPI in his school.

The principal then conducts a training program for his own staff. This training will:

1. enable teachers to conceptualize a model of individualized instruction as a basis for instructional decisions in IPI

2. enable teachers to plan and conduct IPI in their classrooms

3. provide teacher aides with the necessary training which will enable them to fill a supportive role as clerical helpers

4. implement the IPI Reading and Mathematics curriculum

5. evaluate and improve the IPI program by utilizing feedback through the monitoring system devised by RBS.

Third Year Goals

1. To retrain principals, teachers, and aides as necessary.

2. To add all other IPI subject areas to the curriculum.

3. To continue evaluating and revising for improvements.

4. To serve as a model for other school systems that may wish to follow a similar route in order to provide individualized instructional programs.

5. To regularly evaluate for overall project effectiveness.

6. To find resources, within local and state funding capabilities, by which the IPI project can be continued after Title III funds are no longer available.

Long Range Goals

1. To explore ways by which the IPI program could be further enhanced by cooperating with the Center for Management Systems and Systems Development and Analysis at the University of Georgia.

2. To work together with the Teacher Education Division at Valdosta State College, the largest single supplier of teachers to the Lowndes

County System, so that trainees can have experience with IPI prior to their entry into the profession.

3. To work at conceptualizing and implementing programs dealing with ways teachers can enrich the student's learning experiences beyond the skill development inherent in the IPI program.

Since all five of the elementary schools within the Lowndes County School System are involved in the IPI program, all elementary administrators, teachers, teacher aides, and students not in special classes participate in the program. Because the IPI program was financed in part by Title III project funds, a project director and a director of evaluation, both with clerical helpers, were employed. The project director is responsible for puchasing and distributing equipment, materials, and supplies; for serving as a consultant to principals and teachers; for disseminating information about IPI and more specifically the operation of IPI in Lowndes County; and for scheduling dates for evaluating the program.

Three consultants from the Georgia State Department of Education spent a total of approximately 60 man-hours assisting local school personnel in identifying and implementing a suitable individualized instructional system. Services included visiting schools where IPI had already been implemented, participating in the original planning of the project, reviewing the prospectus, and recommending refinements in the project proposal. This representative body also became involved in further project consultation as the program was implemented.

IMPLEMENTATION: LAKE PARK ELEMENTARY SCHOOL

Lake Park Elementary School is one of the five elementary schools in Lowndes County. In order to undertand the necessary changes and strategies which are employed when a school implements IPI, Lake Park has been singled out.

The following chart reviews information unique to the school community.

Lake Park Elementary School

Location: 14 miles south of Valdosta, Georgia

School Enrollment: 619 students in grades 1-6
24 teachers
8 teacher aides
1 librarian

Community: Parents are farmers, skilled or semi-skilled factory employees and upper middle class professionals
Median income - $7,000/family
Racial breakdown - 20% Negro, 80% Caucasian
Educational attainment - 10.5

The administrator of a school participating in an IPI program assumes responsibility for instructional leadership and program management. A training period is required in order to equip him with the necessary skills for assuming these roles and implementing the IPI program.

The Lake Park principal received his initial training in IPI Reading at an Administrative Training Program in Quakertown, Pennsylvania. During a week long session this principal, along with other administrators, was provided with a basic working knowledge of the content, organization and specific materials used in IPI; an understanding of the various staff roles and classroom methods; exposure to the organization and operation of materials; and insight into the classroom experiences of students.

Later the principal attended a second week of training in IPI Mathematics at an Administrative Training Program in Tuscumbia, Alabama. Once again, the principal was provided with a basic working knowledge, an understanding of staff roles, and classroom experiences.

Both Administrative Training Programs were designed and administered by RBS training staff in cooperation with the participating schools.

At the completion of the Administrative Training Programs, the principal returned to Lake Park to draw up his own implementation strategy. Implementation guidelines were provided by RBS in a multipage outline which the principal had to complete. This assured that all areas of implementation would be considered in planning.

First Year Implementation

The principal's implementation strategy included a variety of management responsibilities including: ordering student materials in adequate quantitites; appropriating space for a materials center; ordering shelving or the construction of shelving to store materials; hiring the necessary number of teacher aides; planning and conducting training for teachers and teacher aides; and preparing a schedule for the fall school term that would meet the needs of the IPI programs.

Lake Park has self-contained classrooms for grades 3-6 and open-class situations for grades 1 and 2 (one large room that is equivalent to four normal size classrooms). Space was appropriated for two materials centers - one in the primary wing and one in the intermediate wing. This allowed for accessability to the grade levels they would serve and also allowed for a division of the multi-amounts of materials used with IPI. Space was allotted in each of the materials centers for the audio components used in the IPI Reading program.

The necessary shelving for student materials was built by school carpenters. An inventory of required materials was made and this information passed on to the school system maintenance foreman who supervised the construction and installed the storage units.

The material requirements for the IPI Mathematics and IPI Reading program were sizable. During the Administrative Training Programs, the principal was given a breakdown of all of the materials needed to operate the programs as well as suggested quantities to order for specific number of students. He ordered non-consumable materials such as paperback books, tapes, and hardware along with consumable materials.

Similarly, the intermediate reading program contained hundreds of worksheets which students would use to master the objectives of the reading continuum. In addition, approximately 20 different library and resource books were ordered in multiple amounts and school staff prepared 24 audio cassette tapes to supplement the skillsheets.

Teacher lesson plans and answer sheets were ordered in sufficient quantity for staff members.

Based on the variation and quantities of materials which the principal had ordered, he was able to generate a plan for housing the materials. This plan was later revised by the aides who were responsible for maintaining the materials. Their revision was based on accessibility.

Library and resource books were housed in a special section of the library. This allowed for the full involvement of the librarian and motivated students to utilize the library facilities.

During the summer months the principal interviewed applicants for the eight teacher aide positions. Selection criteria included the following provisions: a high school diploma, a cooperative attitude, an ability to work with other staff, an enjoyment of children; and general sense of responsibility. All of the teacher aides hired were members of the community.

A floating teacher, though optional in IPI schools, can be beneficial in creating a lower student-teacher ratio and/or assisting the teachers with small group work. Money was allotted in the Lowndes County School Budget to hire floating teachers to assist in the implementation of the IPI programs. The Lake Park principal selected five teachers from his regular

staff to fill these vacancies, replacing them with new staff members. His decision to select from the regular staff proved successful since staff members respected and worked well with these people. Their responsibilities centered completely around the IPI programs. Although the floating teachers circulated in many classrooms and were able to contribute a great deal of planning sessions because of their understanding of general problem areas, they were given no greater authority than a classroom teacher. Thus, the classroom teachers saw the floating teachers as a welcome benefit to their classrooms rather than what may have become a threat.

The role of the teacher in IPI instruction varies from the role of the teacher in a more conventional situation. In providing individual instruction, the teachers must be prepared to assist in a variety of topics, drawing on a wide array of resource materials. In this sense, this task is quite different from that of discussing a carefully outlined topic with a total class.

In order to ensure a smooth implementation of IPI, teacher training is a necessity. The principal, as instructional leader, is responsible for training his staff. To assist him, RBS has developed a teacher training package, Teaching in IPI, which introduces the materials, operation and procedures of IPI in an individualized setting.

The Lake Park teachers began their training in IPI at a general orientation meeting of all teachers in Lowndes County involved with the project. This meeting, conducted by the Superintendent, a Title III representative from Atlanta, three RBS consultants, the Federal Programs Coordinator, and the Project Director, was designed to share with the teaching staff the goals of the project, to present an overview of why IPI was selected to meet the needs of the school system, and to present a general overview of the origin of IPI and its operation within a school.

Teachers spend the remainder of the two-week training period with the principal and the assistant principal. The group sessions utilized RBS training materials. During the second week, staff familiarized themselves with student materials and practiced prescription writing. The staff also had opportunities to practice using IPI materials with students. This experience gave teachers the opportunities to practice, first hand, the skills which they had learned during the training period.

Teacher aide training was initiated prior to teacher training. These training session were designed to provide aides with an understanding of their role as paraprofessionals in IPI and to teach them to perform the required tasks. The principal worked closely with the aides during the initial training. He used the training manual, Aiding in IPI, to expose the trainees to the program materials and to introduce scoring procedures. This information was supplemented with discussion on general IPI procedures.

An important part of aide training is the experience derived from the Materials Center. This involves labeling shelves, unboxing materials, doing initial inventory and shelving, setting up folders and files for student work, and preparing scoring keys. The principal discussed with aides the specific tasks in preparing the Materials Center and monitored the operation during the next two weeks.

The final phase of teacher aide training was spent reviewing the materials used in IPI, reviewing the techniques employed by the teacher aide in correcting student work, establishing clear guidelines denoting the responsibilities of the teachers aide, reviewing the schedule and establishing planned meetings where problems could be aired and solved.

First Year Operation

When school opened, the principal of Lake Park met once again with his staff. This meeting was designed to review the strategy for implementing IPI in the classrooms and to promote a positive staff attitude. Maintaining staff morale throughout the first month of implementation was an important key to the success of the program.

IPI Mathematics was implemented in September; the implementation of Intermediate Reading followed in January. The staff designated September as an orientation period for students. This included a briefing on the program, placement testing to determine where each student would begin work in the mathematics continuum and preparing students to function in the program. As each class completed placement testing and orientation, IPI Mathematics became operable in the classroom. By mid-October all classes were engaged in the program. This gradual implementation allowed for concentrated effort of personnel in each classroom as the program began.

During the first few weeks the principal worked very closely with his staff in resolving management problems. These problems occurred because both students and teachers were experiencing a new teaching situation in which the teacher circulates within the classroom, tutoring and giving assistance to students while the student assumes the responsibility of getting his own materials, following his assignment instructions and engaging in an individualized learning situation.

As management problems subsided and teachers gained greater assurance in their own ability and in the ability of their students to operate within the guidelines of IPI, the principal's roles shifted from manager to

instructional leader. Although he continued to deal with the management concerns of the IPI program, his major emphasis was on instructional leadership.

The principal spent approximately 80 percent of his time dealing directly with the IPI program. He monitored the progress of the program and evaluated its strengths and weaknesses within his school. He worked with his staff at weekly grade level planning sessions. These sessions allowed staff members to exchange information about learning and teaching styles, share ideas for supplemental activities, find solutions to classroom management problems, and coordinate their implementation.

To insure that each planning session was profitable, the principal followed an organized procedure. This included: (1) a review of flow charts (charts which record the weekly progress of each student as he works through the continuum), (2) a discussion of immediate concerns of the teaching staff, and (3) a discussion of long-range plans.

The discussion of flow charts proved beneficial to the staff. They used this information to spot potential student problems and to group students who were having similar difficulties. This group was then assigned to one teacher who would work with them until their difficulties were resolved. Such a plan allowed for continual grouping and regrouping within the IPI classes and also allowed for the teaching staff to use their time more wisely.

Immediate teacher concerns generally involved specific problems of individual students, instructional grouping, and classroom management methods. The principal encouraged teachers to discuss these problems openly and because teachers initiated the discussion the sessions were profitable to everyone.

The principal initiated long range plans which were mainly concerned with the development of instructional resources and teaching skills in individualization. The first year, the principal spent most of his time on prescription writing. Prescription writing requires the teachers to analyze diagnostic tests taken by the students and to prescribe teaching materials based on the individual weaknesses. This is a key skill in the IPI system and one which requires continual practice and refinement.

In addition to the Lake Park planning sessions, the principal attended a weekly meeting with the project director and other Lowndes County principals. Discussions at these sessions centered on strengthening the effectiveness of the IPI program in the district. Topics included arrangement of materials, schedule changes, deployment of staff, classroom management concerns and solutions for immediate problems.

By January, the management of IPI Mathematics was in control and the staff prepared to implement IPI Intermediate Reading. A teachers' workshop day was set aside to review the program content and to develop implementation strategies.

Intermediate Reading was planned for five days each week. Three days were to be used for the skills program that parallels IPI Mathematics with a continuum of objectives diagnostic tests, and an individualized setting. The remaining two days were used to instruct teachers in Directed Reading.

Placement testing began immediately after the workshop. The placement tests indicated where each student should begin work on the skills continuum and at what level each student would be grouped for Directed Reading.

Implementation was less complex because both teachers and students already understood the management system. The principal continued to assist teachers in and out of the classroom. Additional planning sessions were scheduled to discuss the new program without detracting from IPI Mathematics.

As management problems began to solve themselves, teachers expressed enthusiasm about the program. They were pleased that they were able to deal with students at all levels of learning in their classrooms.

Community support had been enlisted before the implementation of IPI. The principal realized that the community would view the IPI program as something very different. IPI included a new instructional terminology; continued diagnostic testing; a series of booklets for learning rather than a textbook; the teacher working with individual students rather than the total group; and no student homework.

To educate the community, a PTA meeting was held the spring before IPI was implemented. Parents saw a film which explained how IPI operates within a school. A discussion period followed for questions. In the fall, a mimeographed bulletin was sent to all parents, once again explaining IPI, and parents were invited to visit the school at scheduled times. This gave them an opportunity to talk with the principal, visit the Materials Center, and observe the students at work in IPI classes.

The program has received a great deal of publicity in the local newspaper and local television station. This has been informative to the community and has resulted in many school visitations.

Both students and parents recieve feedback from the program. The students feedback is in the form of a prescription sheet and a student profile. Each student receives a prescription sheet which informs him of his next step in the learning process. Scores from his daily work and diagnostic tests are also indicated. The student profile shows the student's progress as he works through the continuum. It indicates the units in which he has demonstrated mastery and the time spent in achieving mastery. Both forms are kept in the student's IPI folder.

Lowndes County principals felt that reports to parents should parellel reports to students. Thus, a student profile, containing the student's progress record is included as a portion of the report card. The traditional letter grade was eliminated to concur with concept of individualization.

Second Year Expansion

In 1971-72, Lowndes County added the IPI primary reading program and the IPI spelling program to its curriculum. The principals were trained at an Administrative Training Program. In preparing their implementation plans, they considered several items.

1. new staff members needed to be trained in all the IPI subject areas;

2. experienced staff members needed to review the IPI Math and Intermediate Reading programs and to be trained in IPI Spelling and Primary Reading;

3. audio rooms had to be prepared in order for schools to accommodate the Primary Reading and Spelling programs;

4. Matherials Centers had to be reorganized to prepare for the additional materials;

5. teacher aides had to be trained to assume the additional responsibilities;

6. school schedules need to be reworked in lieu of the space restraints of the materials center; the equipment restraints of the audio center; and the numbers of teacher aides available.

The audio center was an immediate concern of the Lake Park principal. Based on his school enrollment, he had to find space for sixty audio playback units. After much thought, the audio center was finally housed in the intermediate Materials Center. This resulted in some students having to leave their own building and go to the intermediate area in order to use the facilities of the audio room.

The maintenance foreman supervised the construction of individual carrels for the audio component and ear piece. These carrels were designed to prevent mobility and subsequent breakage.

The teacher aides spent three weeks in August preparing for the new year. Among their responsibilities were inventorying IPI Math and Intermediate Reading materials; organizing, shelving, and inventorying the primary reading and spelling materials; preparing keys for the new materials organization and labeling the reading and spelling cassettes; and preparing the audio components.

Teacher training was scheduled for eight days. The first five days were used to train new teachers in the IPI instructional system. Returning teachers joined the trainees for the last three days for training in

Primary Reading and Spelling. They also reviewed the Mathematics and Intermediate Reading programs.

The principal scheduled all IPI classes keeping in mind the number of teacher aides and the number of students who could use the audio room at one time. An example of one day's IPI schedule follows.

Implementation strategies were designed to give the new staff time to adjust to the IPI programs. At the beginning of school, IPI Math and Intermediate Reading began quickly. The new staff found implementation less complex than the last year's staff. This was attributed to their ability to consult with fellow teachers and to observe IPI in operation. Placement testing for IPI Primary Reading began for students in second and third grade and for those students in the intermediate grades who were working on prerequisite skills for the Intermediate Reading program. First grade students began immediately with a readiness program that would prepare them to enter the Primary Reading sequence. Some students in second and third grade who placed very low in the continuum were also taken through a quick readiness program and a pre-reader in order to review prerequisite skills.

Students adapted quickly to the Primary Reading program. They enjoyed the individualized setting which allowed them to progress at their own rate through the materials and provided them with individual attention from the teacher.

All students had opportunities to work in the programmed texts and with the audio materials. Group and individual stories accompanied the materials which allowed students to apply their skills and creative inputs.

Lake Park Elementary

Tuesday - IPI Schedule

	First Grades				Second Grades				Third Grades			Fourth Grades				Fifth Grades			Sixth Grades	
	A	B	C	D	A	B	C	D	A	B	C	A	B	C	D	A	B	C	A	B
8:00– 8:40																PL.S L.A.		PL.S L.A.	PL.S L.A.	PL.S L.A.
8:44– 9:34										— MATH —		D/S	SK	PR	SP	D/S	PR	SP		
9:34–10:20	— PR —											SK	D/S	SP	PR	SK	SP	D/S		
10:20–10:40					— PR —															
10:40–11:25					— PR —				— PR —											
11:25–12:05																— MATH —			SK	D/S
12:05–12:50					— SP —											CONFERENCE			D/S	SP
12:50– 1:30	PL.S/L.A.								— SPELLING —											
1:30– 2:15												— MATH —							— MATH —	
2:15– 3:00	— MATH —				— MATH —															
3:00– 3:40					PL.S/M				PL.S/M											

Math - M
Reading
  Primary Reading - PR
  Skills - SK
  Directed and Selected Reading - D/S
Spelling - SP
Planning Sessions - PL.S.
Language Arts - L.A.

Teachers and students expressed delight with the primary materials. Students who had previously shown reading difficulties began showing greater interest in reading and progressed rapidly.

Implementation of IPI Spelling began in November. The principal felt that many spelling difficulties would be solved with the linguistic approach. He concentrated his efforts in reviewing the necessary skills with his staff. Spelling implementation began with a few classes at a time. During the first two weeks of each implementation all floating teachers and the principal worked in the classrooms during the spelling period. This allowed for multiple questions to be asked and for all students to receive individual attention during the period. At the end of two weeks, the students had adjusted to the linguistic presentation of the materials and were able to progress through the basic program with ease.

One additional portion of the IPI Intermediate Reading program was added this second year - Selected Reading. This provided the final balance needed in the program. Students were now progressing in reading development through a skill program that is organized into a continuum much like the Math program; a Directed Reading Program , in which the teaching staff graded the comprehension of selected books on specific reading levels; and a Selected Reading Program, in which students were free to choose their own book and the accompanying activities. Selected Reading added a new dimension to the program and set a prerequisite for student-teacher conferences.

Third Year Refinement

No additional IPI programs were implemeted during the 1972-73 school year. Staff felt that this year was needed in order to further refine the IPI programs presently in operation.

At the end of the second year in operation, the principal of Lake Park prepared a sequence of goals which he planned to implement the following year. The list is lengthy but covers a wide range of the objectives for both the total school district and the individual school. His goals are as follows:

LAKE PARK ELEMENTARY SCHOOL

GOALS FOR THE 1972-73 SCHOOL TERM

"When I look over the following list of goals we need to improve on next year, I become concerned and afraid. I also realize to implement the IPI philosophy completely would be almost impossible. Therefore, the steps we have made and hope to make next year are only a continual spiral up the ladder of educational success.

I will try to arrange these thoughts in reversal order from the accomplishments we seem to have made this year.

We need to prepare additional information for visitors that is not IPI related, i.e., background information on Lowndes County, its size, the size of its schools, staff, student enrollment, number of aides, etc. Invariably, these questions are asked by visitors.

We need to involve our community more in school. Newspapers, television, radio, parent newsletters, more planned parent visits to school, need to be a concentrated effort. I believe the more you involve parents in school, the more problems you solve in the long run. And this "positive" parent support will prove helpful in understanding school problems (especially financial problems.)

Statewide information about the Lowndes County IPI project leaves a lot to be desired. More effort should be put into public relations from the system level.

The research RBS has done in the IPI program should be put into layman's language and disseminated to the public. This should especially be done in Lowndes County.

Dissemination on IPI procedures, practices, changes in organizational structure, etc., should be a must in Lowndes County schools. Floating teachers and aides did this sharing some last year but a concentrted effort should be made this year. What a shame and waste of effort to find we duplicated so many of the same things last year.

This same dissemination should occur between IPI schools nationwide. Especially should it occur between Lowndes and Echols Counties because of their close proximity.

We have assumed new students adjusted to IPI easily. This is not true. We intend to plan a better orientation for these students.

A planned monthly meeting of all students who are self-scoring and/or self-prescribing will be held. This will allow the teacher to monitor the program more closely and, hopefully, help the students become more independent.

The linguistic/phonetic approach used in the primary reading program needs a very close examination by teachers. Hopefully, this will give the teachers a better insight into the philosophy and integral workings of the primary reading program.

We have purchased additional readiness materials for reading: the Sullivan readiness kit; Frostic material; and in-county materials. We hope to "mesh" these together with ideas about the IPI reading program for a much better reading readiness program for our students. Especially, we hope this will be true for pre-first grade students.

Our manipulative aids in math are sorely neglected. This is the fault of the principal primarily, and secondly, because of lack of teacher time during the school day. We hope to work out a program where the manipulative aids can be effectively demonstrated as an instructional aide for IPI continuum.

Some teachers are still "hung up" on believing students should be better in their knowledge of combination facts in math. By the use of various math games, manipulative aides, large and small group drill, better prepared homework, combination facts on tapes and language master cards, and other ideas, we can do a better job here that will somewhat alleviate teacher's fears. Hopefully, some of these areas can be identified in the math continuum and these various games can be placed appropriately.

Even with the new math changes for next year we anticipate the hard areas of math to remain stable. Generally we already know these areas and can still use small group work effectively.

As we go into the "World of Work" curriculum in the elementary schools of Lowndes County, we should plan for "transfer of learning" into other curriculum areas. Especially is this true for math. Hands on activities of math applications would be very appropriate in other curriculum areas.

It is very evident our teachers are conscious of individual differences and rates of learning as never before in their professional careers. We need to continue and work on these experiences in other subject areas and guide the organization of this philosophy, i.e., the meshing of a total language arts program, adapting social studies and science to the unit method of teaching using a multiplicity of textbooks and experiences, sharing of experiences and materials in planning sessions and in faculty meetings.

Planned faculty meetings and planning sessions built around teachers' opinions of IPI seem promising. The upper grade teachers need to "verbalize" with the primary teachers about IPI. Generally speaking, I believe teachers in grades 4-6 are more conscious of individual differences and accept the IPI philosophy more readily than primary teachers. This would also be true of the floating teachers. Interschool classroom visitation should be helpful in expanding the primary teachers insight into the IPI philosophy.

How to use the skills program more effectively, how to use the exercises more effectively, how to incorporate spelling into the total language areas program, are important concerns. Which is most important, spelling words or learning spelling rules and procedures? How can a teacher put these two thoughts together and convey this information to students? Where and when does the student learn the inductive approach as he should? What happens when a third grader places in E level with words including adverbs when he has never heard of an adverb?

How does the teacher help a slower student in any grade become independent in self-prescribing and self-scoring, a skill which he has to learn in spelling in order for the teacher to manage the class? How do you prevent cheating? How can we do a good job for students in the power program?

What can be done for students who have reached their "learning peak" in any particular subject?

The principal must continue to be the instructional leader in his school. I must keep close communication with my faculty. I must get into the classroom. I must evaluate the teacher individually. I must continue to make necessary changes in schedules to insure the IPI program is working in the smoothest way. I must climb another rung of the educational ladder and hopefully, reach a point of offering the best education possible for the boys and girls at Lake

Park Elementary School. I must keep this thought in mind: "Believing that schools have been designed to meet the needs of only a certain type of child and that this restricted design is responsible for the unnecessary failure of many children, we are in the process of developing and implementing a rather extensive educational system which responds to the child, rather than requiring the child to respond to it. The objectives of this responsive learning environment are to help the child develop a positive self-image with regard to himself and to learning to develop his intellectual ability."

With this as our goal, our work is never ending.

RELATIONSHIP: LAKE PARK ELEMENTARY
GEORGIA STATE DEPARTMENT
RESEARCH FOR BETTER SCHOOLS

The three way partnership of local school, state department and educational laboratory resulted in the implementation of programs at Lake Park. This partnership continued to flourish as the programs operated.

RBS assigned Lowndes County a consultant who visited the schools each month. These visits enabled the consultant to diagnose school operation and develop strategies for program improvement, the consultant worked closely with the principal and his staff. At Lake Park the principal and the consultant developed strategies to provide an upgrading of staff skills and designed a continuous training program in both the theory and practice of individualized instruction. This principal-consultant relationship is important and its success results in program improvement. As instructional leader, the principal must be in control of the instructional direction at all time.

In order to establish a communication link with RBS and to promote a favorable attitude toward diffusion of IPI products, the consultant developed a relationship with the central office.

The Georgia State Department also provided a consultant to Lowndes County. This consultant made several visits to the schools during the first and second year of implementation to observe the progress of the IPI program, to see if the objectives of the project were being met and work with the project director and principals in using new implementation strategies.

The state department representative often paralleled his visits with the RBS consultant visit, thus allowing for a discussion of the objectives and the accomplishments of the schools. These meetings often included principals and central office staff and kept open channels of communication between all three participants. This communication link has been vital in the sucessful implementation of IPI and the diffusion of IPI products both to Lowndes County and neighboring schools. Diffusion alone has netted the following accomplishments:

Lowndes County Elementary Schools

1970-71 Implementation of IPI Math and IPI Intermediate Reading
1971-72 Implementation of IPI Primary Reading and IPI Spelling
1972-73 Continued funding for the above programs and implementation of IPI Math and IPI Reading in low achievement students in grades 7 and 8.

Cost

The State Department of Education provided special funds for the implementation of the IPI program throughout the district. These funds provided for:

1. Salaries for training staff and training materials,
2. Salaries for employment of additional staff, extra teachers, teacher aides, and administration of the project,
3. Materials and equipment,
4. Dissemination of information, and
5. Evaluation.

Basic start up costs for the Lake Park School included:

1.	Student Materials -	Math	$ 6,300
		Intermediate Reading	13,200
		Pre Reading	9,000
		Spelling	2,100
			$30,600
2.	Staff Training & Material		
	300 a week x 21 = $6,300		
	Teacher Material 500		6,800
3.	Salaries for additional personnel		
	Teacher	$39,000	
	Aides	20,000	59,000
4.	Equipment		
	Shelving		1,500
			$97,900

The first year additional cost equals $141 per pupil -
The second year cost indicated a decrease in:

1.	Student Materials -	Math	$ 6,300
		Intermediate Reading	4,300
		Pre-Reading	1,600
		Spelling	70
			$12,270

Projected costs, once IPI is fully implemented, are estimated to be about $165 per child per year more than the costs for schools operating in the same area with a traditional structure. This does not include costs for dissemination and evaluation. These additional expenses are not expected to be a problem to the district when Title III funds are depleted. By this time the school district will have an additional $200,000 annually in local funds for maintenance and operation from the current building program. Also an additional $338,398 from six more mills will be levied for maintenance and operation of the program.

EVALUATION

An evaluation of the IPI programs in the Lowndes County Schools is necessary in order to measure the benefits derived from implementing the system. These benefits are congruent with the initial objectives set by Lowndes County and as such, measurement is in terms of achievement and affective gains.

Two evaluation studies, completed at the end of the second year of implementation of IPI at Lowndes County Schools, assess student progress. The first study, IPI and Behavior: An Evaluation of Cognitive and Affective Change, 1972, was conducted by Lowndes County in order to fulfill the requirements of the Title III grant. The evaluation used standardized tests, systematic classroom observations, interviews, and opinion polls to measure the effect of IPI in meeting priority needs (equality of educational opportunity, self-determination, and educational accountability) and educational objectives.

The second study, Nationwide Network, Evaluation Study 1971-72, was conducted by RBS as part of an evaluation effort to assess the effects of the IPI programs in operation. One elementary school in the Lowndes County system was chosen with ten other schools for an indepth evaluation study. This school is not the same as described in the case study but does represent a parallel situation. For the purpose of assessing program outcomes, both student (affective and achievement gains) and school data (assessment of operations and pupil progress) were collected.

Following, each study is described in terms of evaluation techniques employed, testing outcomes, and conclusions.

IPI and Behavior: An Evaluation of Cognitive and Affective Change

A series of questions, related to affective and cognitive change, determined the evaluation design.

1. What effect does IPI have on achievement in Math, Reading, Spelling, and Study Skills?

   Instruments used: California Mathematics Achievement Test (Math Cat); Reading Vocabulary Test and Reading Comprehensive Test of CTBS; Study Skills CTBS; Spelling CTBS

2. Is there a difference in the mathematics achievement of Negro and Caucasian students receiving Individually Prescribed Instruction?

   Instrument used: Iowa Test of Basic Skills

3. Is there a difference in student interest (self-determination) in the IPI schools and the non-IPI schools?

   Instrument used: Cottle's School Interest Inventory

4. Is there a difference in on-task and off-task behavior of students during IPI and during traditional methods of instruction?

   Instrument used: classroom observations

5. Is there a difference in teacher morale in the IPI schools and the non-IPI schools?

   Instrument used: Purdue Teacher Opinionaire

6. Is there a difference in the behavioral referrals in the IPI and non-IPI schools?

   Instrument used: records of discipline problems

7. What effect does IPI have on parental receptivity to the program?

   Instrument used: opinion poll

In collecting data from students and teachers, a random sampling of 260 Lowndes County students in grades two, three, and five was compared with an equivalent random sample drawn from schools in neighboring counties. In addition, a blanket sample of 254 fourth grade students in Lowndes County was used to compare IPI achievement for Caucasian and Negro students. Students in the sample ranged from six to fourteen years of age. The distribution of males and females was approximately equal.

The achievement test results were analyzed with 2 x 2 factoral analysis of covariance using the general linear model. The two independent variables were sex (male and female) and treatment (IPI and non-IPI). In the analysis of the achievement data for grade two, IPI students showed significant positive effects in reading and spelling, with particular significance in favor of the female IPI student. Non-IPI students scored significantly higher in mathematics.

Both third grade and fifth grade achievement scores showed no statistically significant difference for IPI and non-IPI students. Also when sex and race were selected as the control variables to analyze the ITBS scores for fourth grade students, there was no statistically significant difference in achievement between males and females and no statistically significant difference between Caucasian and Negro students.

The School Interest Inventory given to sixth grade students in IPI and non-IPI schools measured student interest in school and the probability of students becoming school dropouts. The results indicated a significant treatment effect in favor of IPI students. Non-IPI students are less interested in school than IPI students and are more likely to become school dropouts.

An analysis of the systematic observations in the IPI and non-IPI classrooms revealed a difference in the percentage of off-task behaviors.

IPI students were off-task in their classroom behavior a lesser percentage of the time than were non-IPI students. (Note of reference: The criteria for off-task behavior in IPI differed from the criteria for non-IPI classes due to the varied teaching methods.)

Teacher morale, considered an important variable in the quality and degree of effective implementation and maintenance of an instructional program, was measured by administering an opinionaire to both IPI and non-IPI teachers. No significant difference was indicated between IPI and non-IPI teachers.

A graphic summary of student progress between first and second year implementation of IPI provides some conclusion relative to the Math and Reading programs. The majority of students placed in the middle levels of the mathematics continuum for both years, but showed an increase in the upper levels (Levels E, F, and G) after the second year of implementation. There was a considerable change in the percentage of students in Levels D and E with more students in Level E and fewer in Level D after the second year.

A comparison of the reading summaries indicated that most students were in the lower levels of the continuum (Levels E, F, and G) during the first and second year. There was, however, a noticeable trend toward the upper levels during the second year with a small percentage of students reaching the highest level (Level K).

In the area of discipline referrals, the monthly records kept by principals IPI and non-IPI schools depict a great contrast in the number and types of discipline problems. IPI schools had less discipline referrals than non-IPI schools for every month of the school year.

TYPES AND NUMBERS OF DISCIPLINE PROBLEMS REFERRED TO PRINCIPALS IN IPI AND NON-IPI SCHOOLS*

Types of Discipline Problems	SCHOOLS	
	IPI	Non-IPI
Antisocial behavior	14	79
Disobedience on bus	0	35
Disobedience in class	10	60
Disorderly conduct on campus	28	49
Disrespect	3	26
Fighting	41	149
Incorrigible	2	0
Leaving school without permission	15	8
Profanity and obscenity	15	20
Stealing	10	14
Tardiness	3	6

The result of an opinion poll of parental feelings toward IPI were based on a random sample of 661 parents. The responding parents reported positive feelings toward the IPI program. Conclusions indicated that the IPI program helped student learning, increased student motivation, and encouraged school attendance.

The mult-dimensional data collected for this evaluation study provides meaingful conclusions about the effects of a systems approach to change and the practical benefits of educational innovation. The conclusions, as listed refer specifically to the questions asked initally in the evaluation design.

Based on the analysis of IPI and Non-IPI student scores, the dimension of student achievement was differentially affected by the IPI program. IPI students in second grade scored significantly higher in reading and spelling. No significant difference was found in mathematics, reading, study skills, and spelling for third and fifth grade students.

Math achievement of Negro and Caucasian students receiving Individually Prescribed Instruction indicated no evidence of race preference.

The student interest inventory indicated that IPI fosters a greater interest in school and IPI students are less likely to become school dropouts.

IPI students were on-task a greater percent of the time.

Teacher morale at IPI and Non-IPI schools is not significantly different.

IPI schools had less discipline problems.

Parents reflect a positive viewpoint in favor of the IPI program.

Nationwide Network: Evaluation Study 1971-72

The evaluation design completed by Research for Better Schools utilized a representative sampling of IPI schools. A comparison school was paired with each IPI school to lend credability to the study. The dimensions of the study draw from student and school data and seek answers to the following questions.

Affective Measures

1. Is there a difference in the attitudes or emotional constraints of the IPI teacher and the Non-IPI teacher?

   Instrument used: opinionaire

2. Is there a difference in the attitude, creativity tendencies, and self concept of IPI and Non-IPI student?

   Instruments used: opinionaire
   inventory

3. Is there a difference in motivational behavior between the IPI student and Non-IPI student?

   Instrument used: parent opinionaire

Achievement Measures

4. What effect does IPI have on achievement in reading comprehension, vocabulary, arithmetic concepts, and arithmetic problem solving?

   Instrument used: Iowa Test of Basic Skills (ITBS)

School data was collected specifically from IPI schools which reflect an assessment of the implementation of IPI and the progress of the students.

This data was used comparatively with the achievement results to answer the following question.

> Is there an interaction between the degree of implementation and achievement results of students in IPI schools?

The results of the study as they appear in this paper are confined specifically to the Lowndes County school. Where the total effect of all schools tested is noted, reference is made.

When considering the affective domain of the teacher, specifically the attitudes or emotional constraints in an IPI school and non-IPI school, several elements were tested: (1) the teacher's perception of herself; (2) the teacher's perception of her pupils; (3) the teacher's perception of her interaction with her pupils; (4) her perception of how the pupils interact among themselves; and (5) her perception of the aide who assists her.

The measure is of sematic differential style, making possible the identification of characteristics of the respondents. Both groups were very positive about their role as being happy, valuable, satisfying, needed, strong, effective, productive, involved, and meaningful. Both groups were positive about their role as being professionally recognized, acting as a resource, autonomous, content, a helper, and instructional not clerical.

The Pupil Opinion Study, designed to measure creative tendency, self concept, and attitude toward school was administered to middle level pupils (Grades 4-6) and in a shortened form to early level pupils (Grade 3). As seen in Table Two, middle level IPI students had significantly higher scores on all three affective measures than non-IPI students.

TABLE 2-Pupil Opinion Study-Middle Level

		IPI			CONTROL		
		Mean	n	Standard Deviation	Mean	n	Standard Deviation
Creative Tendency	7.3651**	139.60	257	14.77	129.59	215	14.90
Attitude toward School	4.5902**	29.10	257	6.09	26.63	215	5.60
Self-Concept	5.6182**	79.35	258	10.59	74.12	214	9.61

** significant beyond .01

The data supports the hypothesis that Individually Prescribed Instruction has a positive effect on pupil self concept, pupil creative tendency, and pupil attitude toward school. The IPI curriculum would be expected to have this effect since its primary aspects reject student-failure, shift control from teacher to the pupil, allow students to question without facing peer pressure, and allow for individualism to emerge.

The results of the pupil opinionaire administered to early level pupils show no significant difference between the IPI and non-IPI schools in early student attitudes toward school and self concept. A significant difference in creative tendency favors the non-IPI student. It would seem that the effects of IPI are not felt at the lower grade level as much as the upper.

The parent opinionaire was designed to use the parent as an observer in assessing the development of behaviors related to motivation. The analysis indicates that IPI pupils are more highly motivated, more self directed and more independent than non-IPI pupils. Thus, IPI seems to have important educational effects.

In assessing achievement outcomes, the Iowa Test of Basic Skills was used on a pre and post basis. Used as a criterion test, the ITBS was administered in an untimed, whole-test way with each child responding to only one of the four subtests used. The four subtests administered was Reading, Vocabulary, Arithmetic Concepts and Arithmetic Problem Solving.

Tables 3 and 4 show the mean grade equivalent scores by grade for the Lowndes County School and its Control school. Tables 5 and 6 show the raw score means by grade for each of the schools. Since the tests were administered in an untimed fashion, the grade equivalent scores are not interpretable in the usual sense.

Table 3, Spring 1972

GRADE EQUIVALENT SCORE MEANS-ITBS

A_1-Arithmetic Concepts

A_2-Arithmetic Problem Solving

	GRADE 3		GRADE 4		GRADE 5		GRADE 6	
	A_1	A_2	A_1	A_2	A_1	A_2	A_1	A_2
IPI	3.78	3.49	4.40	4.76	4.96	5.44	5.02	6.37
CONTROL	3.28	3.92	3.14	3.39	4.27	4.30	-	-
Favoring IPI	+.50	-.43	+1.26	+1.37	+.69	+1.14	-	-

Table 4, Spring 1972

GRADE EQUIVALENT SCORE MEANS-ITBS

V-Vocabulary

R-Reading

	GRADE 3		GRADE 4		GRADE 5		GRADE 6	
	V	R	V	R	V	R	V	R
IPI	3.25	3.16	4.18	3.98	4.83	4.95	5.88	6.10
CONTROL	2.89	3.10	2.89	3.07	4.29	3.96	-	-
Favoring IPI	+.36	+.06	+1.29	+.91	+.54	+1.09	-	-

Table 5, Spring 1972

RAW SCORE MEANS-ITBS

A_1-Arithmetic Concepts

A_2-Arithmetic Problem Solving

	GRADE 3		GRADE 4		GRADE 5		GRADE 6	
	A_1	A_2	A_1	A_2	A_1	A_2	A_1	A_2
IPI	33.50	20.52	46.06	40.00	50.36	44.83	54.06	51.09
CONTROL	33.67	28.76	30.59	27.44	41.07	33.74	-	-
Favoring IPI	-.17	-8.24	+15.57	+12.56	+9.29	+11.09	-	-

Table 6, Spring 1972

RAW SCORE MEANS-ITBS

V-Vocabulary

R-Reading

	GRADE 3		GRADE 4		GRADE 5		GRADE 6	
	V	R	V	R	V	R	V	R
IPI	31.15	32.00	44.55	62.75	44.92	68.18	58.70	91.05
CONTROL	24.81	31.38	31.13	33.24	40.13	42.88	-	-
Favoring IPI	+6.34	++.62	+13.42	+29.51	+4.79	+25.30	-	-

Simple comparisons of grade means in subtests between schools indicate no strong performance difference between the IPI and Non-IPI school, comparing either mean grade equivalent or mean raw scores.

The interaction between the degree of implementation of IPI and the achievement results indicate no relationship was evident with math achievement but a significant relationship was evidence in reading achievement.

In summarizing the results of the evaluation several conclusions are apparent.

> The IPI teacher has a significantly more positive perception of the teacher-pupil interaction in their classroom than the control school.
>
> Middle level IPI students show greater creative tendency, good self concept and a better attitude toward school than control students.
>
> Early level IPI students show no difference in attitudes toward school and self concept.

IPI students are more highly motivated, more self directed, and more independent than control students.

No significant difference is evidenced in achievement of IPI and control students.

Degree of implementation in reading does affect student achievement.

CONCLUSION

Implementation of Individually Prescribed Instruction within a school provides a link between the school seeking an innovation that stresses the individual needs of their students and an instructional system that provides the teacher with the tools to tailor a program of studies to the needs and characteristics of each student. The program requires a shifting of roles: the principal becomes an instructional leader; the teacher becomes a diagnostician; and the teacher's aide becomes the clerk and record keeper. New skills are necessary from the viewpoint of principal, teacher, and aide; all three initially and continuously refine the implementation.

This study, which singles out Lake Park Elementary School as an illustration of Individually Prescribed Instruction is implemented, provides the author with opportunities to generate conclusions both from analysis of the data and from an overview of goals set by RBS. The conclusions reinforce those previously stated by RBS.

1. Administrators must be trained to implement the program of Individually Prescribed Instruction.

2. Administrators are capable instructional leaders in their respective schools.

3. Administrators make instructional gains by working in classrooms and understanding the teachers problems and successes.

4. Teachers must be trained to effectively implement Individually Prescribed Instruction in the classroom.

5. Students' attitude toward school improve when Individually Prescribed Instruction is implemented.

6. Students grow toward self-direction and self-initiation of activities in the Individually Prescribed Instruction program.

7. Implementation of Individually Prescribed Instruction into Special Education classes is successful and motivational to the students.

8. Parents view Individually Prescribed Instruction as a positive effect in viewing their child as an individual.

9. Implementation of two Individually Prescribed Instruction Programs in one year is feasible.

10. District wide implementation is motivational to administrators and teachers.

11. Continuous training provides answers to current and long range questions, refining the program while motivating the participants.

12. Library involvement increases where Individually Prescribed Instruction utilizes the library.

Lowndes County, Georgia is a unique and courageous school district. Implementing major changes in teaching and learning and allowing for the individual differences of all students, it must rate with the most progressive of American school districts. The experiences of students, parents, and teachers have been extremely positive and again demonstrate that committed school people are an extremely positive and powerful influence in their school community.